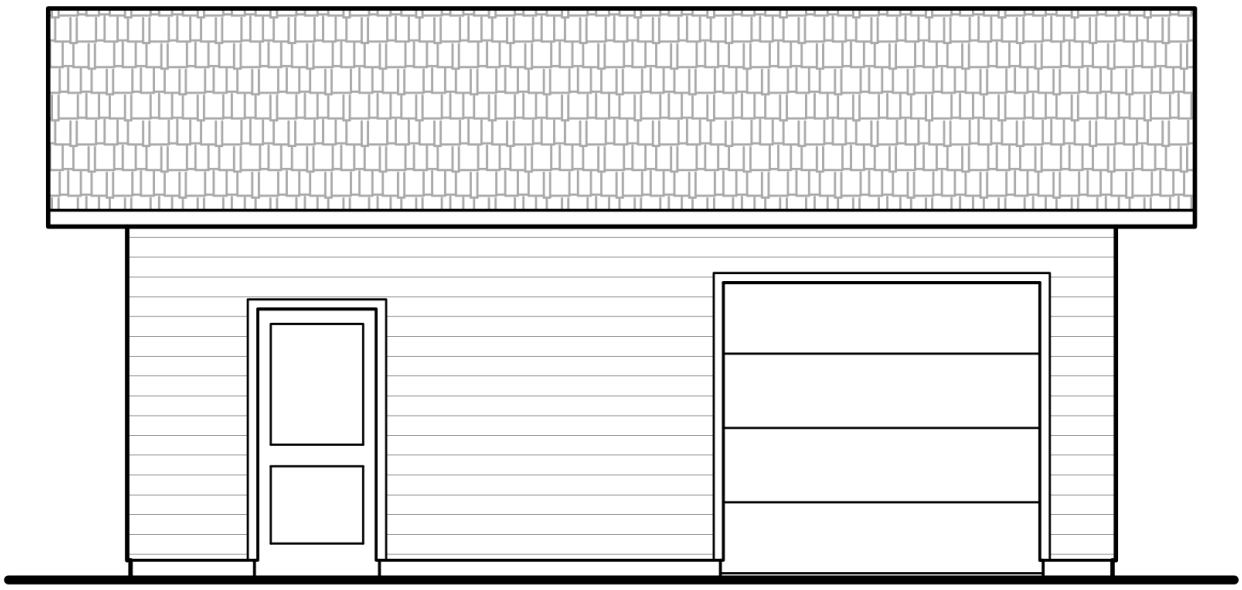
GARAGE PACKET

One and Two Family Dwellings

This packet of information is designed to make getting a permit for a new garage easy. With a bit of homework on your part, garage permits can be issued over-the-counter. The construction drawings included in this packet may be used for building permit application. Following the instructions in this packet will not only provide guidance in the construction of your garage but will help you pass inspections.

Table of Contents

The use of this package applies to unheated single-story garage, storage shed, or shop-type buildings accessory to single-family residential uses and structurally independent of the residential building, and on land sufficiently flat that no retaining walls are necessary. These plans may be used to aid in construction of an accessory building, and, if a permit is required, they may be submitted to the Permit & Information Center for the permit. **Before proceeding, check with Building & Permit Services staff for zoning or other regulations that may affect your project.**



This packet consists of explanatory pages and a set of construction documents. The construction documents may be used to construct your building. If followed correctly, this will result in a safe and durable garage or accessory building.

The construction documents are set up to facilitate easy planning of a customized building that will fit most situations. Basic drawings – site, floor, foundation, and roof plans, and four elevations – are laid out with light lines to identify typical opening heights and the wall bracing requirements established by code. Doors and windows may be drawn anywhere inside these lines, and dimensioned on the plans. Not all drawings may be used for each building; for instance, if no opening is desired in a wall, no change would be made in the elevation drawing, and if the garage were to be attached to a structure, that elevation also would not be used. One may also desire to attach a site plan from another source, rather than using the blank provided. Examples are provided to demonstrate how the drawings may be used.

The basic drawings are enhanced with details that describe exactly how to construct the building, including connectors, brace panel information, and so on. These drawings supply most information required to complete the building.

Note: If used for a permit, an approved copy of this building detail package and attached site plan must be on the job site and available to the inspector during the inspection process. If engineered trusses are used, engineered truss drawings must also be approved by the building department and on site for the inspector to review.

It is the responsibility of the permit holder or the permit holder's representative to notify the building department when stages of construction that require an inspection are reached. Inspections must be scheduled online. You will be asked to set up an account with your name and email address. After your permit has been associated with your account, you will be able to see a list of outstanding inspections. If you do not have access to a computer, you can schedule inspections by contacting Inspection Support staff during business hours at 541-682-5283.

Refer to the legal sized sheet titled "Most Commonly Missed Items" for additional code requirements that apply to all projects. Ask Building & Permit Services staff if you do not have it. (It is normally attached to the drawings when a permit is issued.)

See Building & Permit Services staff for special conditions and restrictions for manufactured dwellings within manufactured dwelling parks.

To be safe, remember to call before you dig, and have your underground utilities located.

Oregon Utility Notification Center
811 or 1-800-332-2344

Frequently Asked Questions:

When is a permit required for an accessory building?
A building permit is not required for detached accessory buildings that are less than 200 square feet in area and not more than 10 feet in height, as measured from the finished floor to the average height of the roof. (The building height issue may be different as defined by Eugene Code – verify with Land Use staff.) If plumbing, heating, or electrical systems are to be installed, or the building is to be attached to a dwelling, permits are required for that work. **Even if a permit is not required, zoning regulations (setbacks, etc.) and public utility easements and restrictions are still applicable.**

When may this package be used to obtain a building permit?
This package may be used for structures up to a maximum size of 24'x30', single story, in R-1 (low density residential) zoning, provided there are no conflicts with easements or other entities and the structure is unheated. Intake staff will use a checklist to verify that you are able to use the accelerated review route. City staff will conduct reviews to verify compliance with stormwater, utility, and zoning regulations; structural review has been completed and pre-approved per this packet.

What information must be determined prior to applying for a permit?
(Prior to application, check with the building department to identify land use, zoning, or other regulations that may affect your project.)

- Determine where your property lines are located and what setbacks are between the property lines and the wall(s) of the accessory building.
- Determine if there are any public or private easements on the property and whether or not the accessory building may be constructed over the easement.
- Provide a site plan on minimum 11 x 17" paper drawn to scale 1" = 20 or 1/16 = 1' provide a 2" border with property lines dimensioned, distances from proposed structure to property lines and to other structures. Include property corner elevations, driveways, sidewalks and North arrow.
- Mark dimensions for width and length of building, and location, size, and type of any openings (doors, windows, etc.) on the plans. Provide dimensions using feet & inches (e.g., 4'-6").
- If using trusses for the roof, submit a copy of your plans to a truss manufacturer and obtain truss engineering calculations and drawings.
- Gutters, downspouts, and/or rain drains to an approved destination may be required. Check with Public Works Engineering staff prior to permit application.

What information must be presented to the Permit & Information Center to apply for a permit?
Fill out a building permit application and submit two copies of the plans. Keep the originals for your own records.

When will the permit be issued?
The project will receive initial review at the counter. In some cases, it may be issued at that time. If further review is required, it will usually be conducted within three working days, and you will receive notification of any changes or approval of the permit at that time.

What will the permit cost?
Permit costs are based on the square footage of the proposed structure, plan reviews performed and the scope of electrical, plumbing and / or mechanical work if applicable. The Residential Fee Estimating Guide on the City's website can be used to estimate project fees. Residential Fee Estimating Guide For further assistance in determining permit fees, you may contact a residential plans examiner at Ask a Building Question 101 or (541) 682-5611.

When & where should the permit be applied for?
Permits can be submitted to the Permit Information Center at the Atrium Building (99 W. 10th Ave.), across the street from the Downtown LTD Bus Station and the main Eugene Public Library, Monday through Friday from 9 a.m. to 5 p.m., except holidays.

When must the permit be paid for?
An initial plan review fee will be charged at application. The remainder will be assessed when the permit is issued. Permits issued through the Residential Counter Permit program will be charged at the end of the review, and issued immediately thereafter.

Can the permit submittal be by mail?
Provided all necessary fees are paid and all information is included, yes. However, delays may occur if all information is not provided, or if fees are not paid.

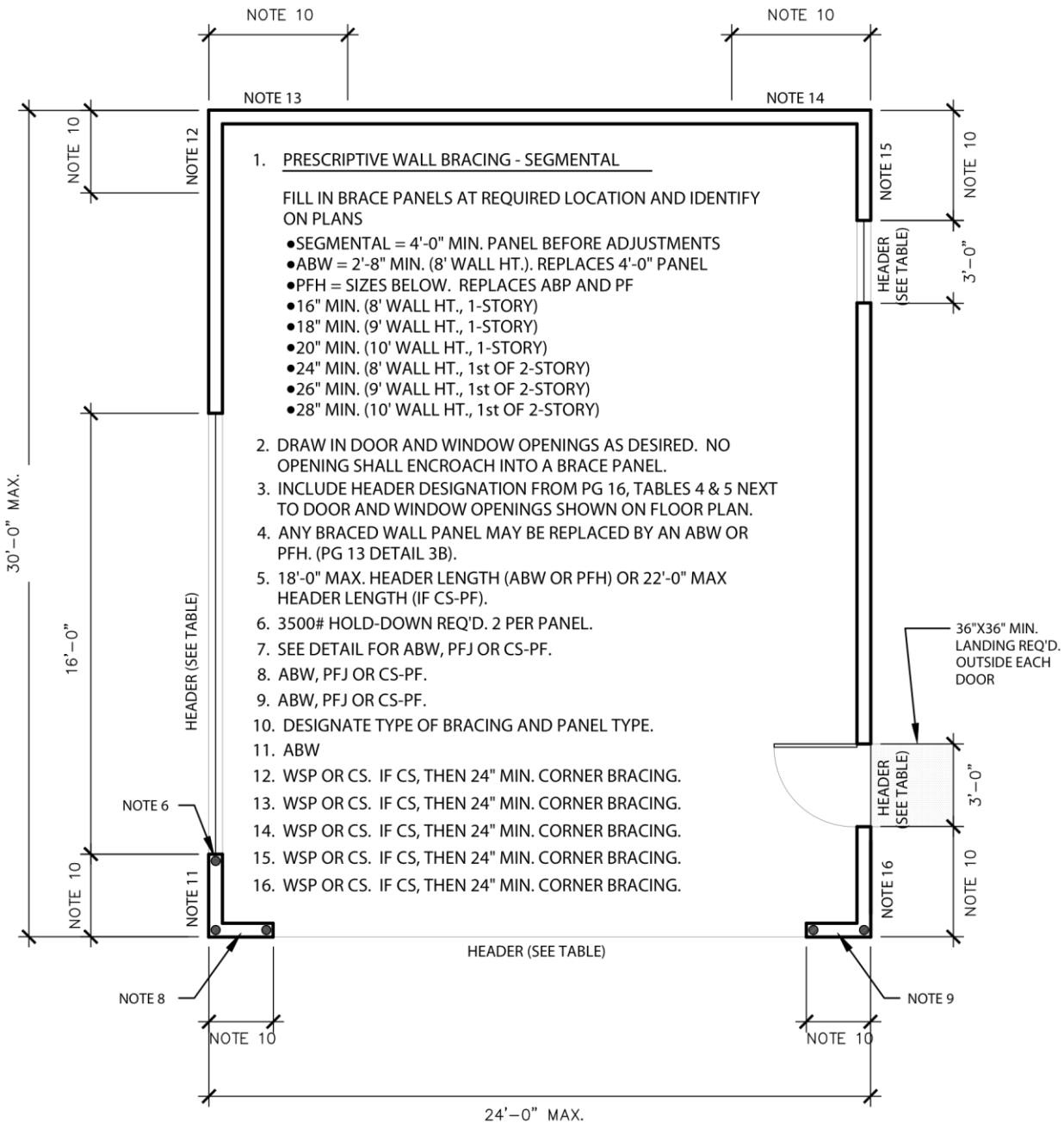
Who do I call if I have a question?
You may call the Residential Question Line, 541-682-5611. If you have already submitted for permit, and the permit has not been issued across the counter, contact the Project Coordinator. Contact information for the Project Coordinator may be found on the website, at www.eugene-or.gov/bldgpermittracking.

May the details & plan in this packet be altered?
You may choose any configuration allowed within the plans (e.g., number and location of windows or doors between braced wall panels). However, the details shown are the only ones approved under this packet. If you wish to vary beyond the limits of the plans and details enclosed, you must submit additional information, including engineering, if applicable, and your application will be routed for a normal structural and code review.

When and how do I call for an inspection?
Call for inspection before covering the last work done. A list of required inspections will be issued with the permit. The footing inspection must be approved prior to the foundation pour, after forms and rebar are in place. The list of required inspections for your project will appear each time you log into your account and select your permit to schedule inspections. You will also receive contact information for your area building inspector and the project coordinator, and will be able to contact them for additional information.

Department Contact Information:

Permit Process Line:	541-682-5505 (questions about intake and permit process)
Residential Question Line:	541-682-5611 (pre-submittal questions on building permits or plans)
Land Use Question Line:	541-682-8336 (zoning or setback questions)
Public Works Engineering:	541-682-8400 (questions on special setbacks, utility locations, driveways, and stormwater)



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SAMPLE GARAGE FLOOR PLAN

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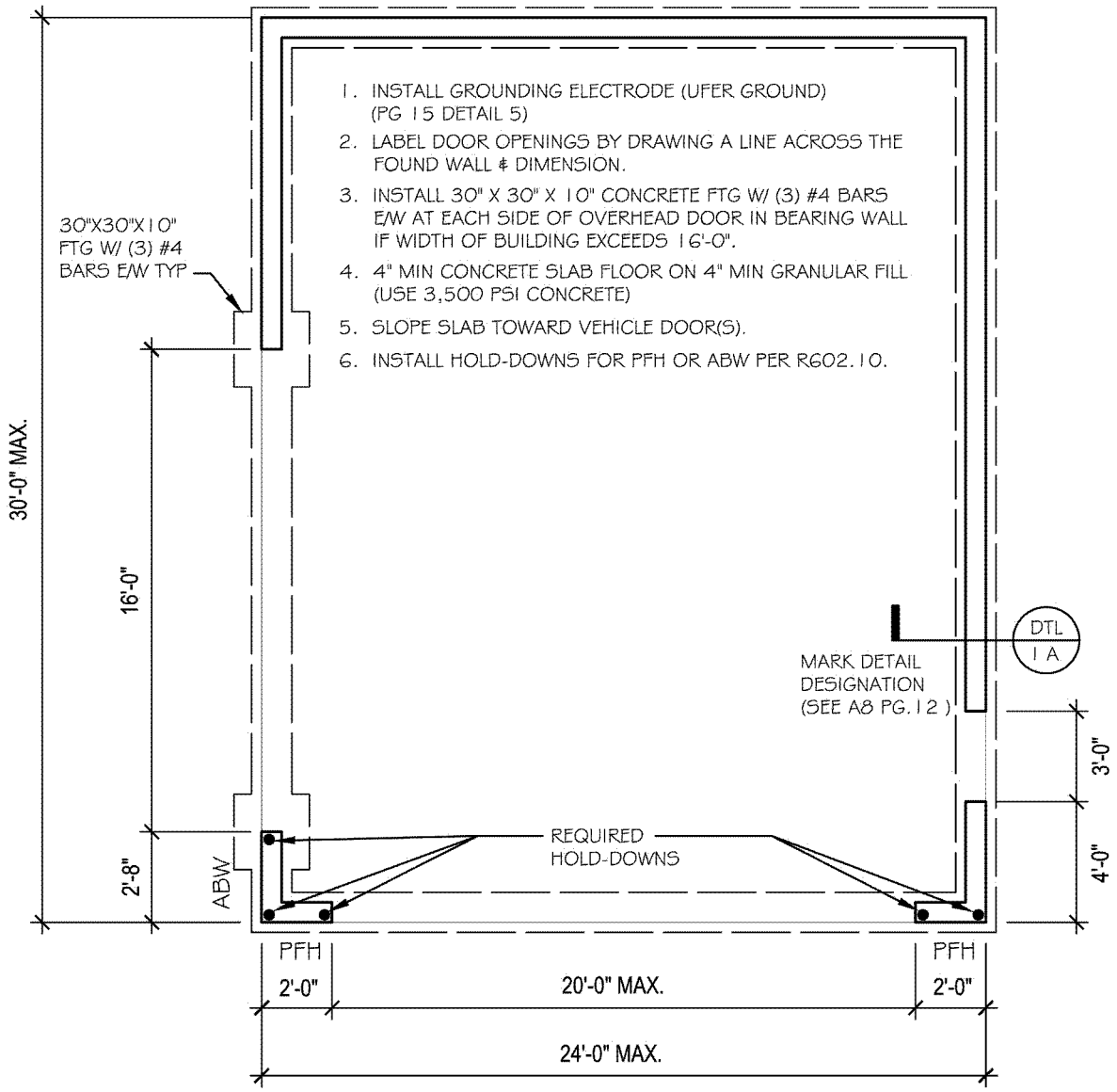

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SAMPLE FOUNDATION PLAN - FOOTING/STEM WALL

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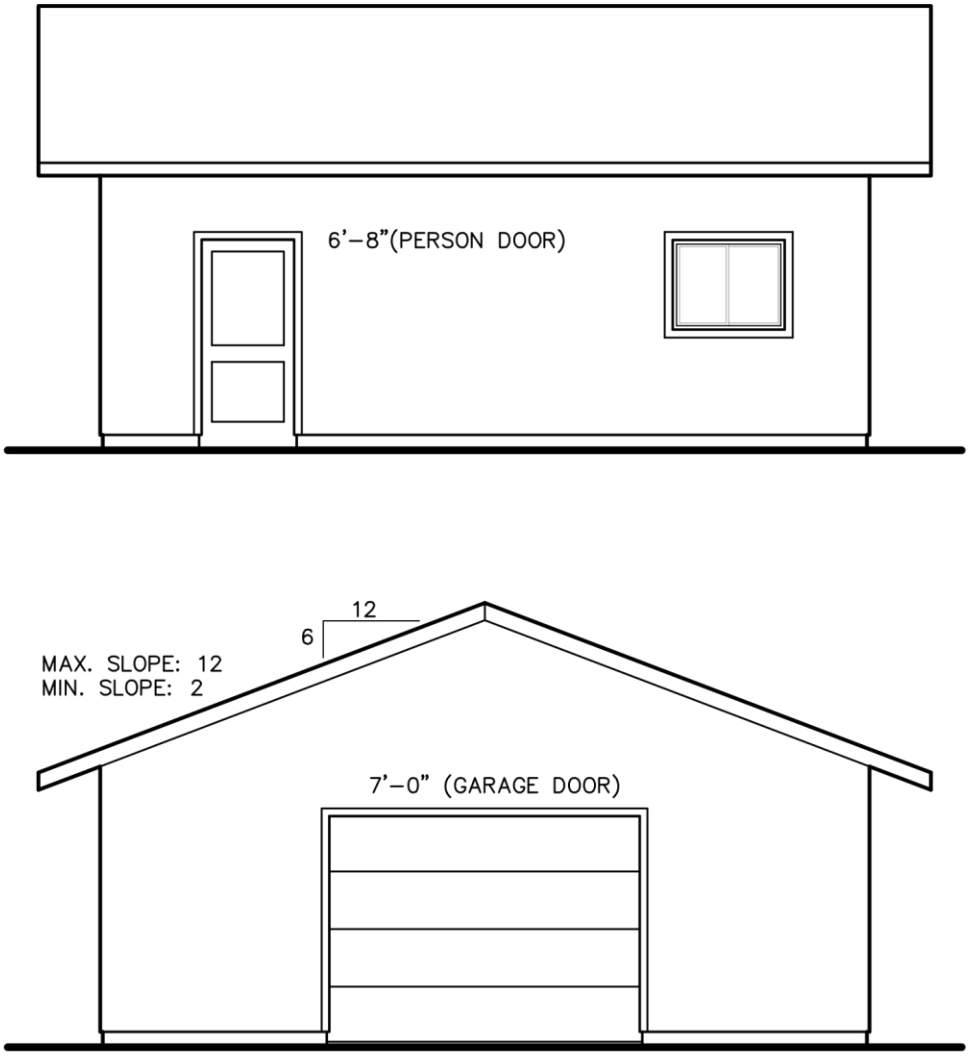

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SAMPLE ELEVATIONS

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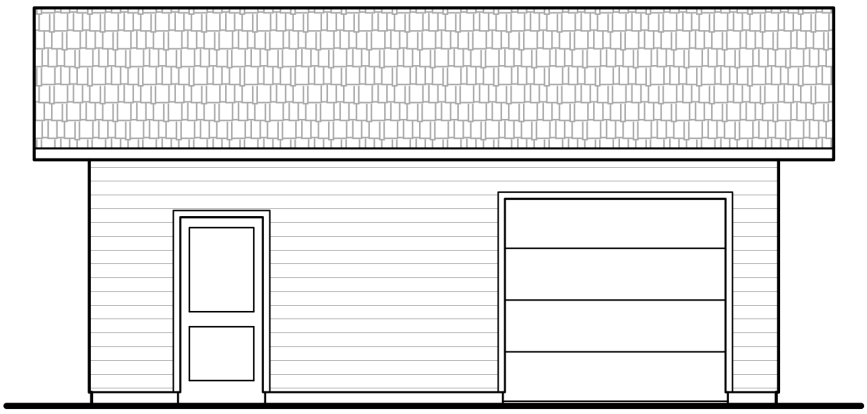
Garage

Construction Documents

Index:

- Construction Notes & Specifications
- Floor Plan
- Foundation Plan
- Roof Plan
- Details
- Elevations
- Details
- Structural Tables

Applicant's Name:	Project address:
Applicant's Address (if different):	Phone No.:



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General
1. Accessory buildings constructed under this permit are not approved for commercial or dwelling uses.
2. Garages may be attached to, but not supported by, a dwelling only as provided in these details.
3. All lumber shall be #2 Douglas Fir, Hemlock-Fir, or better, except wall framing (studs) may be stud grade. Glu-laminated beams shall be minimum 24F-V4 grade.
4. Treat the cut end of pressure-treated wood with paint-on preservative.
5. To prevent corrosion, all screws and nails in contact with pressure-treated wood shall be hot-dipped galvanized or stainless steel, and all hardware (joist hangers, straps, anchors, etc.) shall be stainless steel or galvanized with G-185 coating. (Look for products such as "Zmax" from Simpson Strong-Tie or "Triple Zinc" from USP.) Bolts ½" or larger in diameter need not be galvanized.
6. Concrete shall have a minimum compressive strength of 3500 pounds per square inch.

Wall Framing & Bracing
1. Wall studs shall be capped with a double top plate equal to the width of the studs and overlapping at corners. End joints in top plates shall be offset 24" minimum.
2. Building paper, or 15# roofing, shall be applied over sheathing horizontally with 6" min. lap.
3. If gypsum wallboard is used as an interior finish material, it shall be a minimum of ½" thick (5/8" thick recommended for ceilings). Note: ½" gyp. is required if the building is attached to a dwelling.
4. Install flashing at all exterior window and door openings.

Roof Framing & Covering
1. Roof rafters and ceiling joists shall be sized and spaced according to Tables 1, 2, & 3. Ridge boards shall not be less than one-inch nominal thickness and not less in depth than the cut end of the rafter.
2. Trusses shall be connected to the top plate with metal truss clips, such as Simpson H2.5 or USP RT7 (see Pg. 12 Detail 2B).
3. Truss engineering must be on the job site at framing inspection; no storage or attic trusses permitted.
4. Roof sheathing shall be minimum 7/16" OSB or 15/32" CDX plywood. The sheathing shall be nailed to rafters or trusses with 8d nails @ 6" o.c. max. at the edges, 12" o.c. max. field.
5. For roofs sloped 2:12 to 4:12, use two layers of 15# felt underlayment; install a 19" strip at the eave, then 36" strips with a 19" lap.
6. Where a ceiling finish is installed (typically gypsum wallboard) the attic area must be ventilated with screened vents (bird block) at the eave, and roof vents at the ridge. The minimum area of ventilation shall be 1 square foot of opening to 300 square feet of attic area, with one-half of the vent area at the eave and one half near the ridge or top of the gable end. If the attic is more than 30 inches high at the ridge, a minimum 22"x30" attic access is required.

Attachment of Accessory Building to House or Manufactured Dwelling
1. Accessory building must be structurally independent of dwellings.
2. Only one side of the accessory building may be attached per this plan set.
3. No openings are permitted between the accessory building and sleeping rooms. No windows are permitted between the accessory building and dwelling. No ducts are permitted (see Pg. 15 Detail 6).
4. One door, up to 36" wide, is permitted between the garage and dwelling. The door shall be solid wood or honeycomb steel not less than 1 3/8" thick, or 20-minute fire-rated, without glazing.
5. Braced panels may be installed on the inner side of the stud wall facing the attached dwelling.
6. A minimum of ½" gypsum board must be attached to the wall between the accessory building and the dwelling, on the garage side. If there are any structural sheathing panels installed on the inside face of the studs, the gypsum board must be installed over it.
7. A person door providing egress from the accessory building to the outside is required.
8. A minimum of one door exiting from the dwelling, independent of the accessory building, is required.

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SPECIFICATIONS

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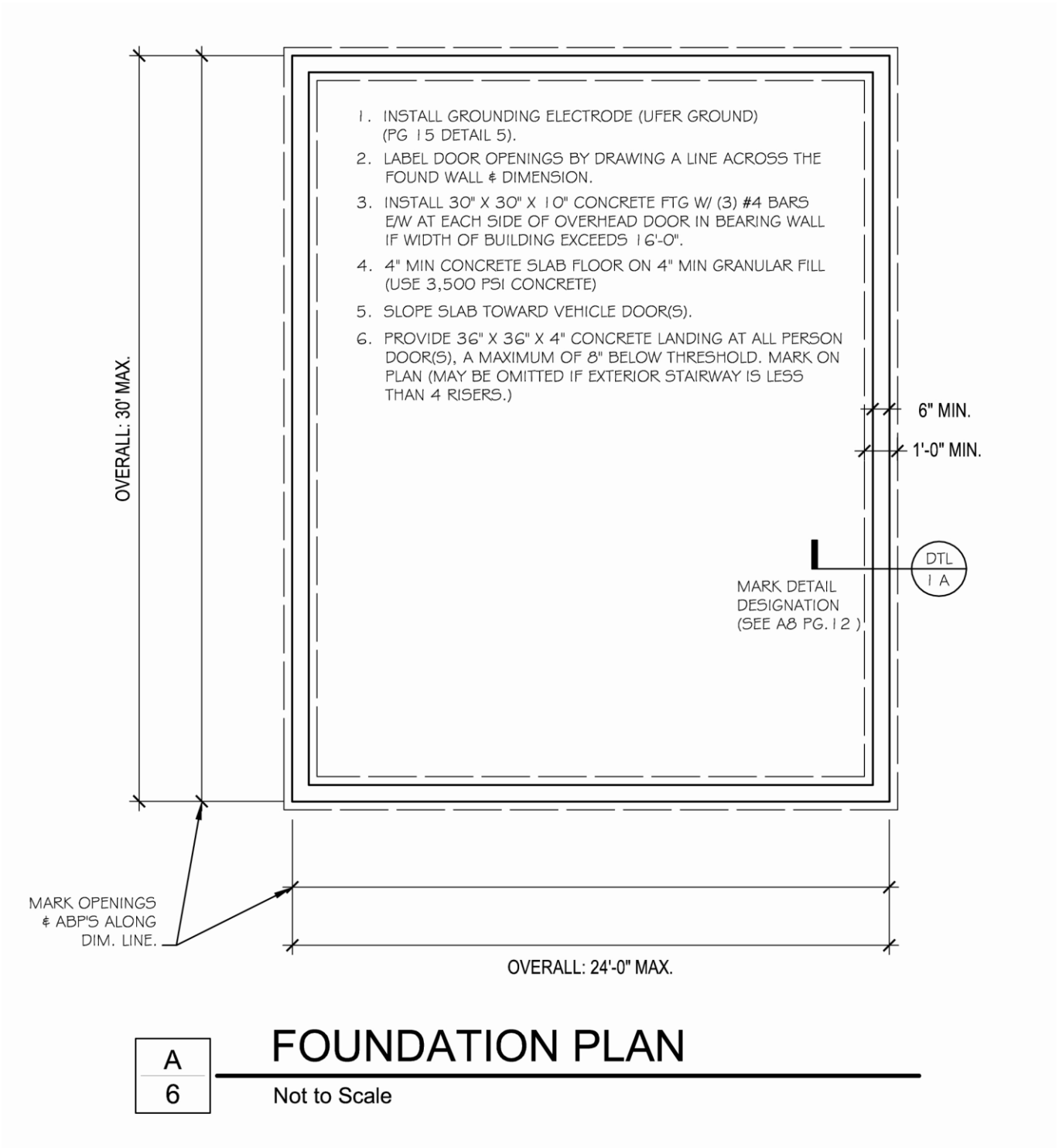

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FOUNDATION PLAN

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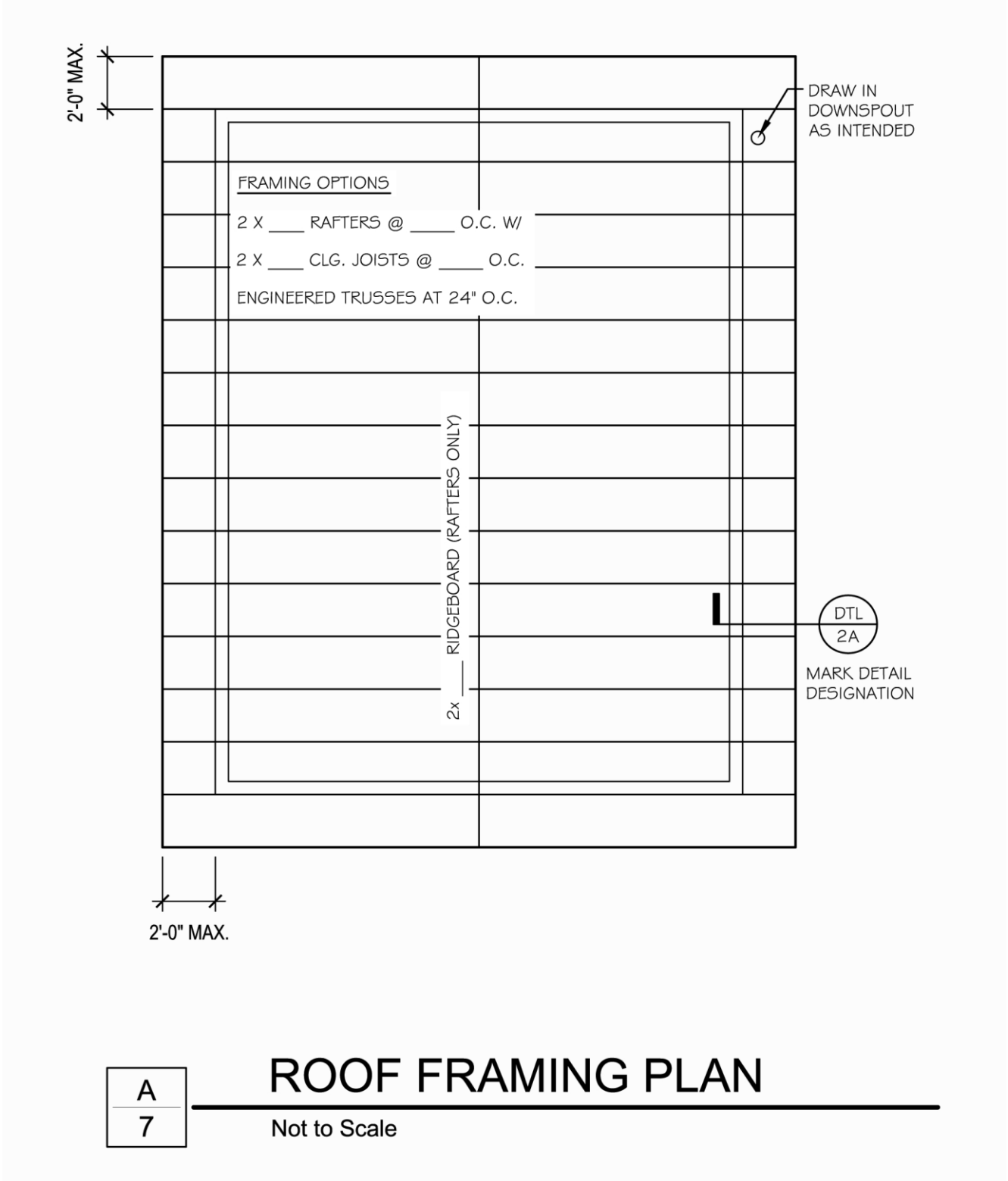

A/7 ROOF FRAMING PLAN

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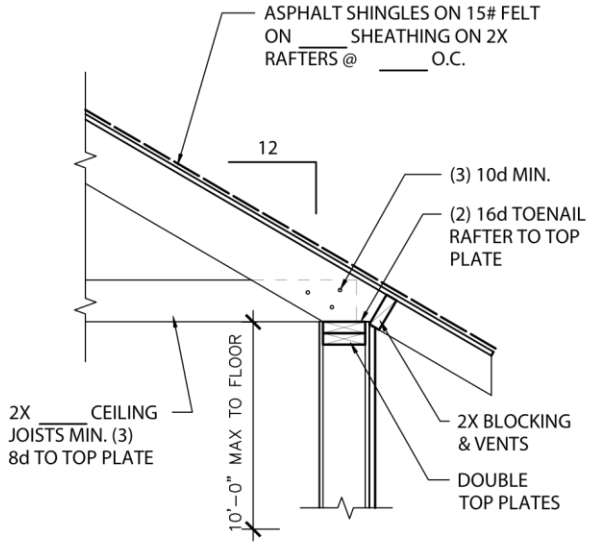

DTL 2A: RAFTER EAVE

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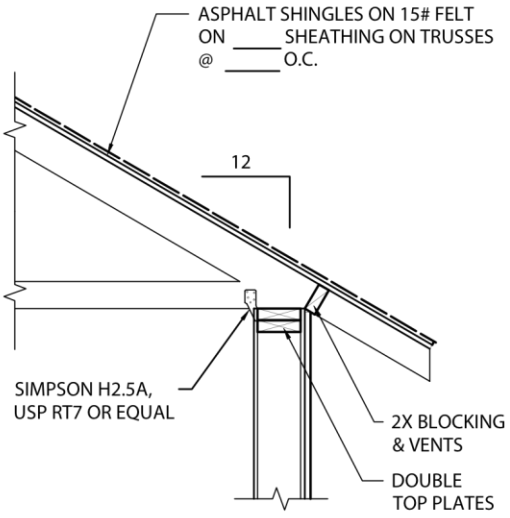

DTL 2B: TRUSS EAVE

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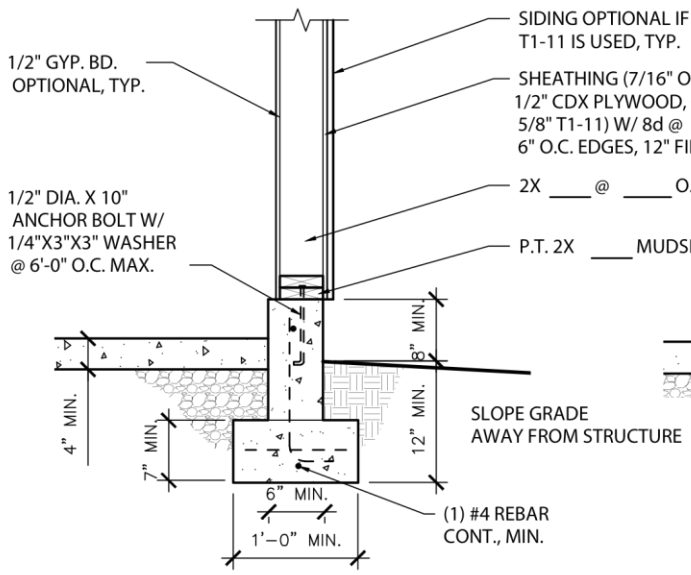

DTL 1A: STEM WALL FTG

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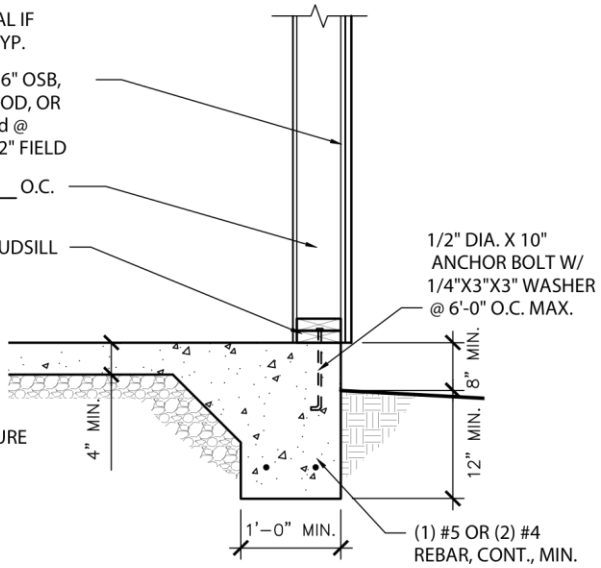

DTL 1B: MONOLITHIC FTG

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DETAILS

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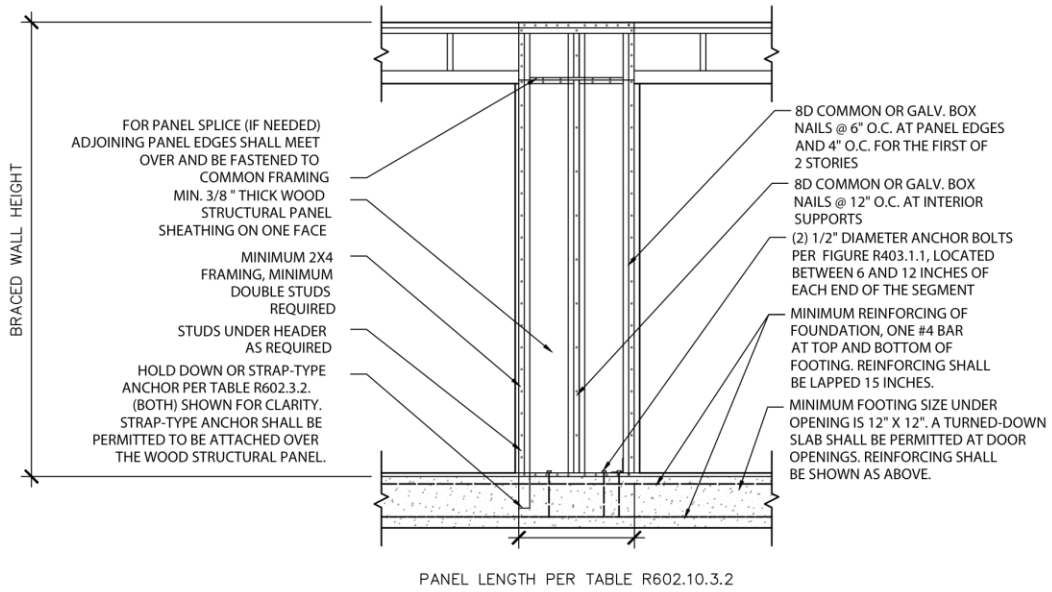

DTL 3B: FIGURE R602.10.3.2 ALTERNATE BRACED WALL PANEL

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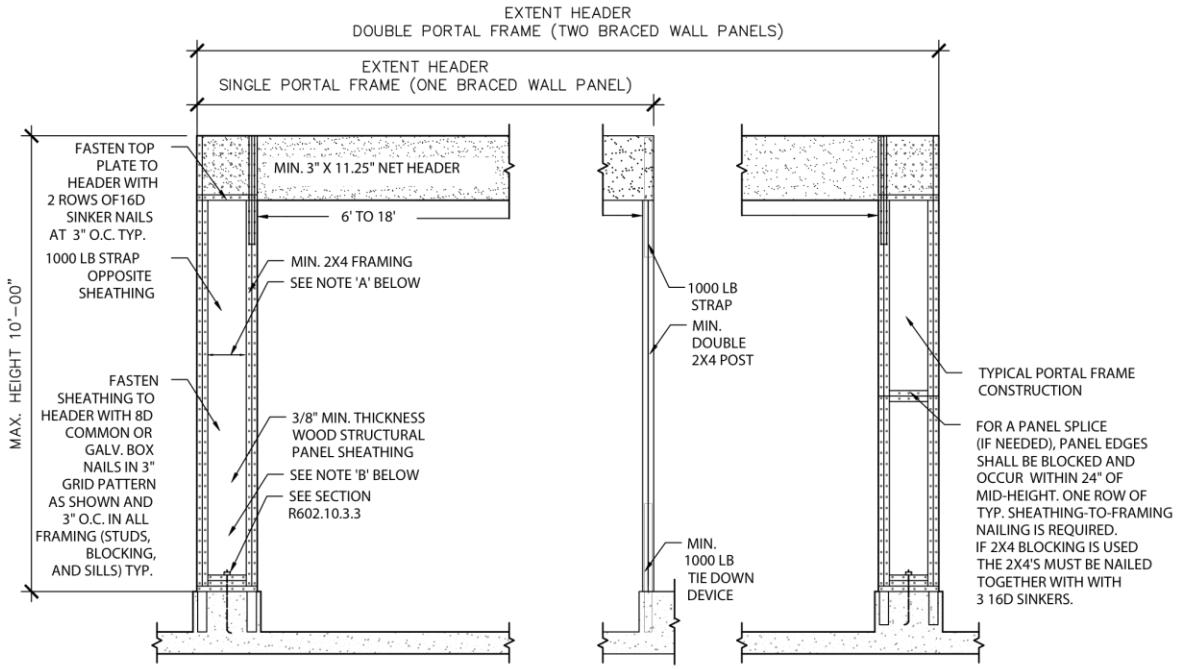

DTL 3A: FIGURE R602.10.3.3 METHOD PFH (PORTAL FRAME WITH HOLD-DOWNS)

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For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound force = 4.448 N.
a. Min. width: 20 inches for a one-story structure with 10-foot plate height, 18 inches for one-story structure with 9-foot plate height and 16 inches for a one-story with 8-foot plate height. Min. width: 30 inches for use in the first story of a two-story structure with a 10-foot plate height, 26 inches for the use in the first story of a two-story structure with a 9-foot plate height and 24 inches for use in the first story of a two-story structure with an 8-foot plate height.
b. Min. 3500 lb tie-down device (embedded into concrete and nailed into framing).

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DETAILS

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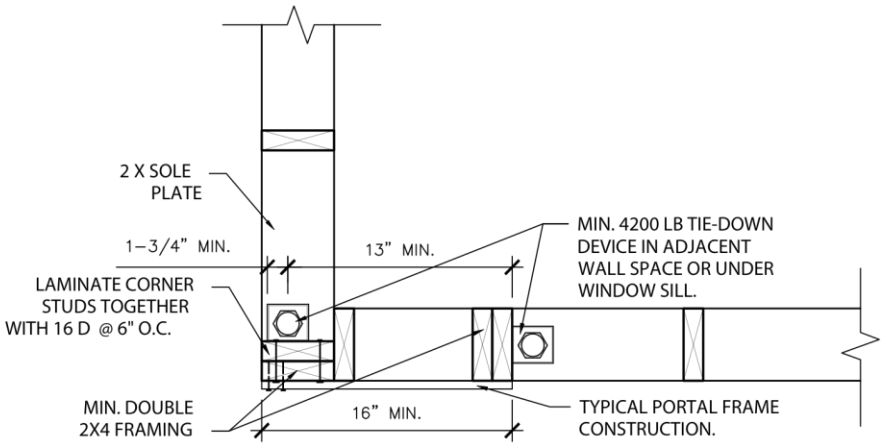

DTL 4B: PORTAL FRAME WITH HOLD-DOWNS AT CORNER CONDITIONS

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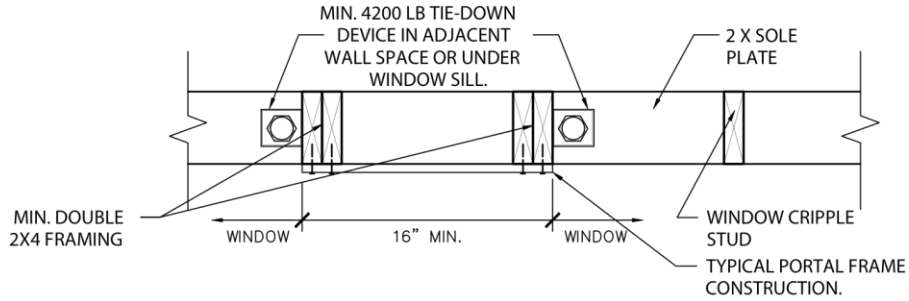

DTL 4A: PORTAL FRAME WITH HOLD-DOWNS AT INTERIOR CONDITIONS

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DETAILS

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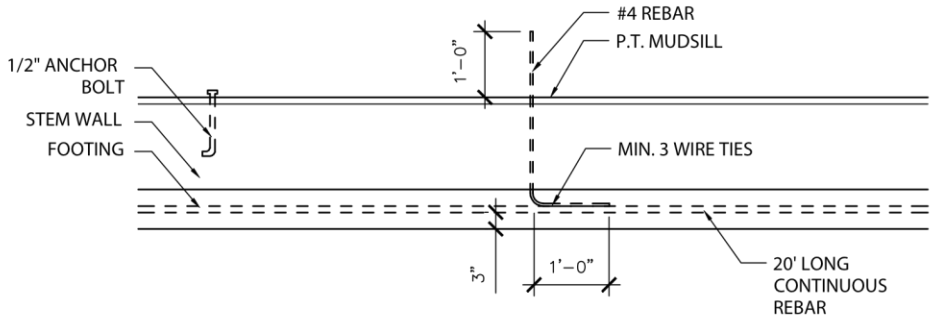

DTL 5: GROUND ELECTRODE DETAIL

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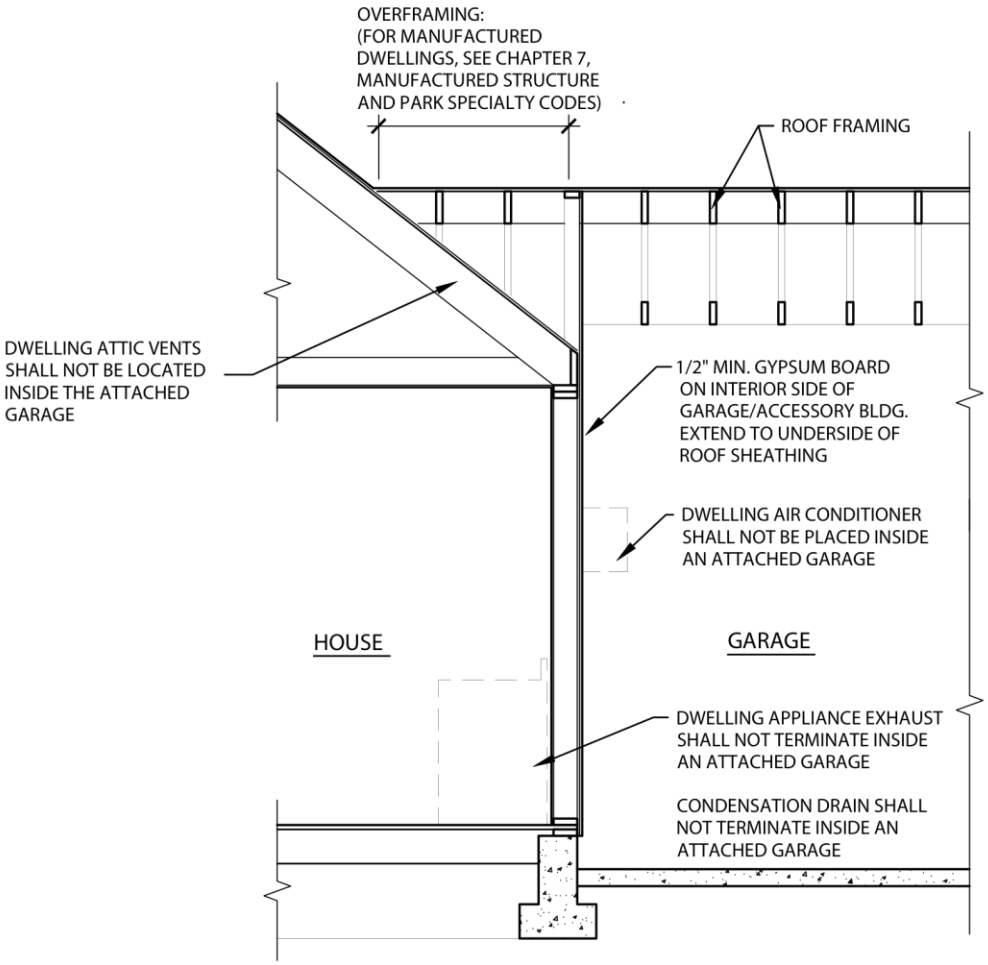

DTL 6: SEPARATION DETAILS

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DETAILS

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Table 1: Rafter Spans (Gable Roof)

Building Width	Rafter Spacing	Rafter Size
Up to 10'-0"	16" O.C.	2x4
	24" O.C.	2x4
10'-0" – 20'-0"	16" O.C.	2x6
	24" O.C.	2x8
20'-0" – 24'-0"	16" O.C.	2x8
	24" O.C.	2x10

Table 2: Rafter Spans (Shed Roof)

Building Width	Rafter Spacing	Rafter Size
Up to 10'-0"	16" O.C.	2x6
	24" O.C.	2x6
10'-0" – 15'-0"	16" O.C.	2x8
	24" O.C.	2x10
15'-0" – 19'-0"	16" O.C.	2x10
19'-0" – 24'-0"	12" O.C.	2x12

Table 3: Ceiling Joists [1,3]

Building Width	Rafter Spacing	Rafter Size
Up to 10'-0"	16" O.C.	2x6
	24" O.C.	2x6
10'-0" – 14'-0"	16" O.C.	2x8
	24" O.C.	2x10
14'-0" – 18'-0"	16" O.C.	2x10
	24" O.C.	Not Allowed[2]

1. Ceiling joists are sized to support gypsum wallboard ceiling and attic storage.
2. 2x10 may be used to max. 16'-0"
3. For roof slope 3:12 and less, 2x6 may be used to max. 14', 2x8 may be used to max. 18', and 2x10 max. 22' spans.

Table 5: Header Size for Gable End Wall [1]

Opening Width	Header Size
Up to 6'-0"	4x4, (2) 2x4
6'-0" to 8'-0"	4x6, (2) 2x6
8'-0" to 12'-0"	4x8, (2) 2x8
12'-0" to 16'-0"	4x10, (2) 2x12

1. See ABW detail for minimum header at ABW.

Table 4: Header Size for Bearing Walls (Wall Supporting Roof) [7]

Building Width	Opening Width [1,2]	Header Size [3,4,5,6]
Up to 20'-0"	Up to 3'-0"	4x4, (2) 2x4
	3'-0" to 6'0"	4x8, (2) 2x8
	6'-0" to 10'0"	4x12 DF#1, 3 1/8" x 9" GLB
	10'-0" to 12'0"	6x12, 3 1/8" x 9" or 5 1/8" x 7 1/2" GLB
	12'-0" to 14'0"	3 1/8" x 12" or 5 1/8" x 9" GLB or 3 1/2" x 11 7/8" 1.5E Timberstrand LSL
	14'-0" to 16'0"	3 1/8" x 13 1/2" or 5 1/8" x 10 1/2" GLB or 3 1/2" x 11 1/4" or 5 1/4" x 11 1/4" 2.0E PSL
20'-0" to 24'-0"	Up to 3'-0"	4x4, (2) 2x4
	3'-0" to 6'0"	4x8, (2) 2x8
	6'-0" to 10'0"	6x12, 3 1/8" x 9" or 5 1/8" x 7 1/2" GLB or 3 1/2" x 11 7/8" 1.5E Timberstrand LSL
	10'-0" to 12'0"	3 1/8" x 12" or 5 1/8" x 9" GLB or 3 1/2" x 11 7/8" 1.5E Timberstrand LSL
	12'-0" to 14'0"	3 1/8" x 9" or 5 1/8" x 1- 1/2" GLB or 3 1/2" x 11 1/4" or 5 1/4" x 9 1/4" 2.0E PSL
	14'-0" to 16'0"	3 1/8" x 13 1/2" or 5 1/8" x 12" GLB or 3 1/2" x 11 7/8" or 5 1/4" x 11 1/4" 2.0E PSL

1. Maximum clear opening allowed when applying for permit with this package is 16'-0"
2. A minimum of two (2) jack studs (trimmers) is required to support headers spanning 12'-0" or more.
3. Headers more than 3 1/2" wide must be installed in 2x6 framing.
4. All GLBs (Glu-lam Beams) are min. 24F-V4 grade.
5. All header sizes are minimums – larger members may be substituted.
6. Engineered wood (LSL, PSL) specified is an iLevel product. Other products may be substituted if they are of equal or greater capacity. Check manufacturer's specifications
7. See ABW detail for minimum header at ABW.

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STRUCTURAL TABLES

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